Book Reviews and Bibliographical Notes.

A Manual of Diseases of the Nervous System. By W. R. Gowers, M.D., F.R.C.P. Vol. I., Diseases of the Spinal Cord and Nerves. Philadelphia: P. Blakiston Son & Co., 1886.

The prevailing interest among scientific physicians in the study of nervous diseases is proven by the large number of new treatises which have appeared within the past five years. And a comparison of the volume under consideration with any similar book issued five years ago will demonstrate the many changes of view, advances in knowledge, and modifications in treatment which the work of this period has made. Of all the manuals published in English up to the present time, this is the best; and it may be said to equal, in all respects, any work published in German. Gowers has long been known as one of the foremost authorities on nervous diseases in England. His works have been characterized by a clearness of conception and definiteness of statement which make their perusal pleasant as well as profitable. It is evident that he has a knowledge of the subjects upon which he writes, derived not only from wide reading, but from careful observation and from pathological investigation. It should be the effort of medical authors to bring clinical facts and post-mortem findings into harmony, and in this effort the author is pre-eminent. It is also the duty of authors to weigh carefully, from wide experience, suggestions regarding treatment, and here again Gowers shows a proper conservatism.

The special features of this volume are the concise and complete statement of anatomical facts necessarily preceding any consideration of nervous diseases, the admirable analysis of nervous symptoms in general, and the exhaustive discussion of the various diseases of the nerves and spinal cord.

The fact that Gowers' small treatise on localization of diseases of the spinal cord has passed through three editions within five years is evidence of his success in handling the difficult subject of nervous anatomy. In the sections in this book devoted to the anatomy and physiology of the nerves and spinal cord, a very satisfactory summary of our knowledge of these organs is presented. All the important facts are included, and there is a degree of detailed statement, including most recent views, both of the anatomy and physiology, hardly to be looked for in a general text-book. And the clear conception of the facts is greatly aided by the large number of figures accompanying the text. The cerebro-spinal tracts are traced with much clearness; for example, the motor tract, which he considers in its entire course from the cortex of the brain to the muscles as composed of two segments, an upper and a lower. "Each consists of a ganglion cell above, a nerve fibre, and the terminal ramification of the latter. The upper "cerebro-spinal" segment consists of the cortical ganglion cell, and the pyramidal fibre which proceeds from the cell passes through the brain and cord, and ends by dividing in the spongy substance of the anterior cornu. The lower "spino-muscular" segment consists of the spinal ganglion cell, and the fibre proceeding from this passing through the anterior root and nerve-trunk to the muscles where it divides and ramifies on the muscular fibre. The elements of the two segments do not probably correspond in number. Each cortical spinal element is connected with many spinal muscular segments. It will be found that this conception of the motor path conduces to clearer ideas of many phenomena of diseases" (p. 116). It is a matter for congratulation that this manner of tracing functional tracts through the brain and cord has received the approval of the English school of physicians, and it is to be hoped that it will soon be adopted by their anatomists; for, to the adoption of this method long ago in Germany are due many of the modern advances in cerebral physiology. In tracing the sensory tracts in the cord, the well-known view of Gowers, based upon two cases in his practice, of ascending degeneration in the antero-lateral tract, is urged again, viz.: that in the lateral part of the cord, near the periphery, lies a tract which conveys sensations of pain. The slender basis of this assertion is, however, frankly admitted, although the more general view, that sensations of pain and temperature are conveyed upward in the gray matter, a view based on numerous cases of syringo-myelitis, is not emphasized. Wherever in the consideration of the physiology of the cord disputed points are met, there is observed a care in presenting various views, and an originality in proposing solutions of the difficulty, which contrast markedly with the positive assertions found in some other works of the English school.

In the discussion of nervous symptoms, there is an admirable summary of the action of the various muscles, and the consequences of their paralysis; also of the effects of paralysis of the various nerves in producing deformity. The facts and illustrations are largely derived from Duchenne's work, "Physiologie des Mouvements," but have never before been presented to English readers in such a complete manner. After a careful study of these pages (22 to 37), no one need make a mistake in the diagnosis of a case of peripheral paralysis. The diagnosis of nervous diseases, by the aid of electricity, is concisely stated, and some original diagrams, illustrating the use of electrical examination in prognosis, are especially interesting. It seems likely that electrical charts of a nervous case are to become as important as temperature charts in fevers, both for diagnosis and for prognosis. A somewhat more detailed statement of vaso-motor and trophic symptoms might have been given, but the essentials are to be found under the discussion of individual diseases.

It is impossible in a limited review to mention the special features of the work in the sections upon individual diseases of the nerves and cord. We may notice, however, the chapter on multiple neuritis, which contains all the facts at present known regarding this newly-discovered affection; the chapter on locomotor ataxia, which includes a full discussion of the theory of the disease; and the chapter on ataxic paraplegia, under which title Gowers describes combined sclerosis of the cord.

In all these chapters, as well as in those upon other lesions of the cord, the description of the pathology of the disease is very exhaustive, and is accompanied by drawings of cases under the observation of the author. The work contains, therefore, important additions to the previously known facts regarding the diseases of the cord. In the chapter on chronic spinal muscular atrophy, several diseases hitherto considered distinct are grouped together, viz., progressive muscular atrophy, amyotrophic lateral sclerosis, and chronic polio-myelitis anterior. While pathological facts certainly point to a close relationship between these diseases, the clinical picture of each is usually so distinct at the outset that they deserve special consideration; and the number of cases of progressive muscular atrophy which go on to bulbar paralysis is so much greater than that which go on to amyotrophic lateral sclerosis that it is somewhat misleading to group the latter two together, and separate the former. The subject of arthritic muscular atrophy, to which little attention has been given in previous text-books, is clearly presented. The chapter on tumors of the cord is less satisfactory than others, and seems to have been condensed from lack of space.

In regard to the sections upon the treatment of various nervous diseases, it may be said that they are entirely honest. So many absurd claims of cures by the application of electricity in nervous diseases have been advanced that a wholesome reaction against the indiscriminate use of this by no means harmless agent has at last taken place. The presentation of the legitimate claims of electricity, as well as a frank statement of its uselessness in certain cases, is an admirable feature of this book. For example, in the acute atrophic paralysis of children, Gowers says: "Electricity has been strongly advocated and largely used in the treatment of this disease, and there is reason to believe that it is useful, although its influence has been much exaggerated. In no sense is it a curative agent, and there is no evidence that its application to the spine is capable of increasing the degree or accelerating the course of the recovery of the nerve-elements. Nor is it easy to obtain evidence of its influence over the muscles. If the wasting is rapid, this progresses in spite of daily and sedulous applications. Faradization is useless, since the muscles cannot respond to it; but to the voltaic current they act readily, and their daily stimulation, by its means, tends to maintain their contractility. This is, it is true, of no avail if no recovery takes place in the spinal cord, but in most cases some recovery in the cord does occur, and when, after months, the new elements regain the power of conducting the voluntary impulse, the muscles are in a better condition to respond to it if they have been regularly galvanized than if they have been left alone." Such a clear statement of fact sweeps away the fraudulent claims of cures in infantile paralysis, so often urged in the past, and will commend itself to every one who has used electricity with care in these cases. In discussing its application in myelitis and locomotor ataxia, he is equally frank in affirming that it has little influence in affecting the pathological processes. In the treatment of peripheral lesions, the use of electricity is warmly advocated, and clear directions are given as to the method of its application. It might have been well to have been more specific in regard to the strength of the constant current used, the necessity of proper galvanometric measurements, and the duration of the applications. Those who have De Watteville's admirable little work on electricity can, however, supplement what is lacking here.

While the printing of the book and its general appearance are attractive, it is to be regretted that the many figures, which are of great importance to the pathologist, are so poorly executed. Whether this applies to the English edition, as well as to the American reprint, we are unable to state. But wood-engraving has attained such a point of excellence in this country that there is no excuse for neglecting to provide for a proper production of cuts in a work of such importance.

If the second volume, which will treat diseases of the brain, reaches the standard of excellence attained by the first volume, there will be no necessity for the publication of another work on nervous diseases for some time to come. M. A. S.

A Brief Synopsis of the Various Points Involved in the Coarse Examination of the Brain and Spinal Cord. By FRANCIS X. DERCUM, M.D., Pathologist to State Hospital for Insane at Norristown; Instructor in Nervous Diseases, University of Pennsylvania. **First Annual Report of Pathology Department.** By FRANCIS X. DERCUM, M.D., and IDA V. REEL, M.D., Pathologists. Reprinted from the Sixth Annual Report of State Hospital for the Insane, S. E. District of Pennsylvania, at Norristown, Pennsylvania, 1885.

These two brief monographs, from the laboratory of the State Hospital for the Insane at Norristown, Pennsylvania, should be cordially welcomed by every one who has the cause of scientific psychiatry at heart. The abundant material for pathological research which is furnished by State insane hospitals has, in large part, been neglected in Pennsylvania as in other commonwealths. The appointment of pathologists, both resident and visiting, for